

15. ON SOME NEW FRESHWATER SHELLS FROM CENTRAL AFRICA. BY S. P. WOODWARD, F.G.S. COMMUNICATED BY PROF. OWEN.

(Mollusca, Pl. XLVII.)

The four shells which form the subject of the present note were collected by Captain Speke in the great freshwater Lake Tanganyika in Central Africa.

The large bivalve belongs to the genus *Iridina*, Lamarck,—a group of river-mussels, of which there are nine reputed species, all belonging to the African Continent. This little group has been divided into several subgenera. That to which the new shell belongs is distinguished by its broad and deeply-wrinkled hinge-line, and is called *Pleiodon* by Conrad. The posterior slope of this shell is encrusted with tufa, as if there were limestone rocks in the vicinity of its habitat.

The small bivalve is a normal *Unio*, with finely sculptured valves.

The smaller univalve is concave beneath, and so much resembles a *Nerita* or *Calyptrea* that it would be taken for a sea-shell if its history were not well authenticated. It agrees essentially with *Lithoglyphus*,—a genus peculiar to the Danube; for the American shells referred to it are probably, or, I may say, certainly distinct. It agrees with the Danubian shells in the extreme obliquity of the aperture, and differs in the width of the umbilicus, which in the European species is nearly concealed by the callous columellar lip.

In the Upper Eocene Tertiaries of the Isle of Wight there are several estuary shells, forming the genus *Globulus*, Sow., whose affinities are uncertain, but which resemble *Lithoglyphus*.

The Lake Tanganyika (situated in lat. 3° to 8° S. and long. 30° E.), which is several hundred miles in length and 30 to 40 in breadth, seems entirely disconnected with the region of the Danube: but the separation may not always have been so complete, for there is another great lake, Nyanza, to the northward of Tanganyika, which is believed by Speke to be the principal source of the Nile.

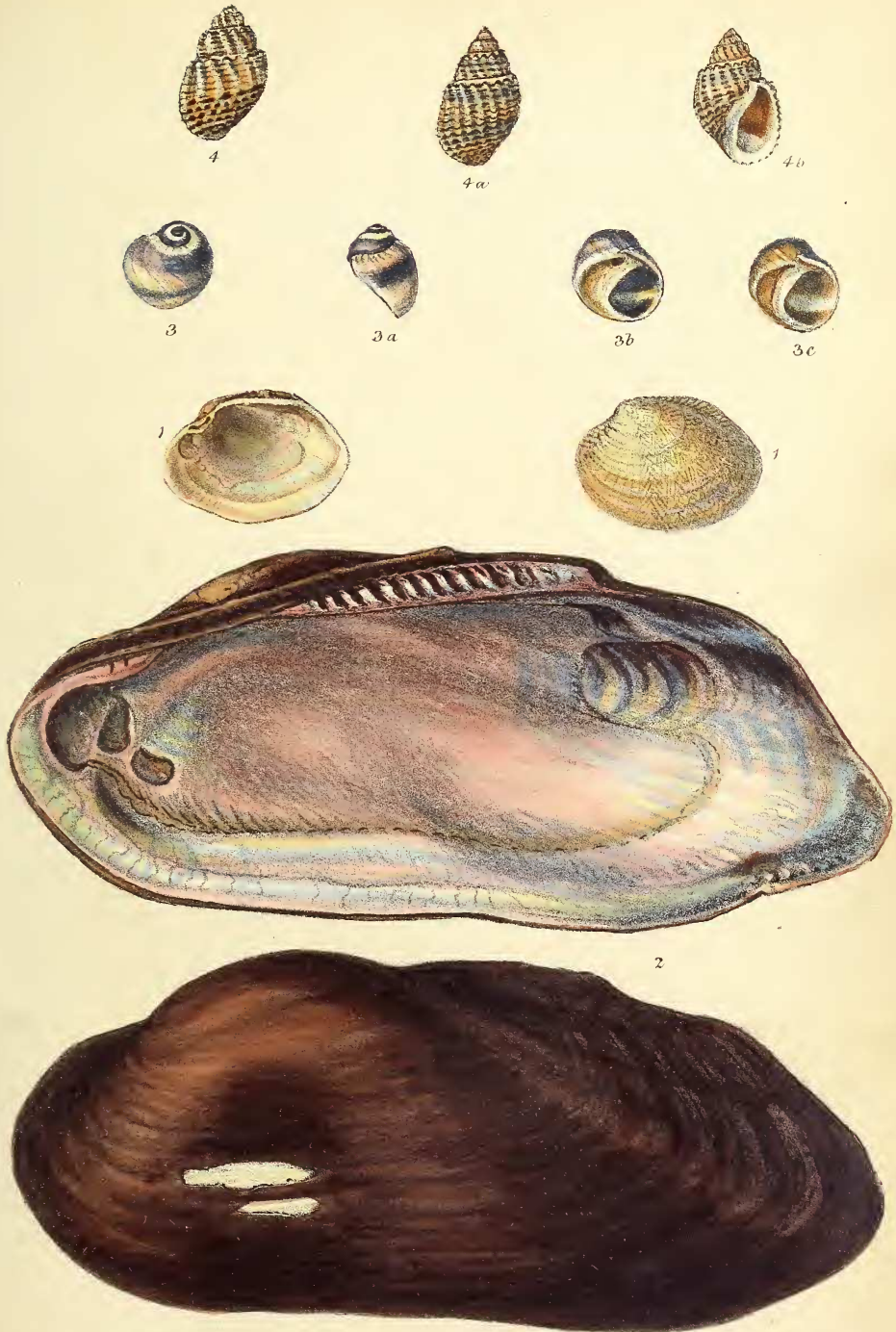
The other univalve is a *Melania*, of the subgenus *Melanella* (Swainson), similar in shape to *M. hollandi* of S. Europe, and similar to several Eocene species of the Isle of Wight. Its colour, solidity, and tuberculated ribs give it much the appearance of a small marine whelk (*Nassa*); and it is found in more boisterous waters, on the shores of this great Inland Sea, than most of its congeners inhabit.

1. IRIDINA (PLEIODON) SPEKII, n. sp. (Pl. XLVII. fig. 2.)

Shell oblong, ventricose, somewhat attenuated at each end; base slightly concave; epidermis chestnut-brown, deepening to black at the margin; anterior slope obscurely radiated; hinge-line compressed in front and tuberculated, wider behind and deeply wrinkled.

Length $4\frac{3}{4}$, breadth 2, thickness $1\frac{3}{4}$ inches.

Testa oblonga, tumida, extremitatibus fere attenuata, basi subarcuata; epidermide castaneo-fusca, marginem versus nigricante;



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Fig 1 *Unio* Burm. 2 *Iridina* (Pleodon) Speki.
 „ 3 *Lithoglyphus* zonatus. 4 *Melania* nassa.

linea cardinali antice compressa tuberculata, postice latiore, paucis rugis arata.

2. *UNIO BURTONI*, n. sp. (Pl. XLVII. fig. 1.)

Shell small, oval, rather thin, somewhat pointed behind; umbones small, not eroded; pale olive, concentrically furrowed, and sculptured more or less with fine divaricating lines; anterior teeth narrow, not prominent; posterior teeth laminar; pedal scar confluent with anterior adductor.

Length 12, breadth $8\frac{1}{2}$, thickness $5\frac{1}{2}$ lines.

Testa parva, ovalis, tenuiuscula, postice subattenuata; umbonibus parvis, acuminatis; epidermide pallide olivacea; valvis lineolis divaricatis, decussatim exaratis; dentibus cardinalibus angustis, haud prominentibus.

3. *LITHOGLYPHUS ZONATUS*, n. sp. (Pl. XLVII. fig. 3.)

Shell orbicular, hemispherical; spire very small; aperture large, very oblique; umbilicus wide and shallow, with an open fissure in the young shell; lip continuous in front with the umbilical ridge; columella callous, ultimately covering the fissure; body-whirl flattened, pale olivaceous, with two brown bands, darker at the apex; lines of growth crossed by numerous oblique, interrupted striæ.

Diameter 5-6, height 3 lines.

Testa orbicularis, hemisphærica, late umbilicata (apud juniores rimata), spira minuta; apertura magna, valde obliqua; labio calloso (in testa adulta rimam tegente): pallide olivacea, fasciis duabus fuscis zonata; lineis incrementi striolis interruptis oblique decussatis.

4. *MELANIA (MELANELLA) NASSA*, n. sp. (Pl. XLVII. fig. 4.)

Shell ovate, strong, pale brown, with (sometimes) two dark bands; spire shorter than the aperture; whirls flattened, ornamented with six brown spiral ridges crossed by a variable number of white, tuberculated, transverse ribs; base of body-whirl with eight tuberculated spiral ridges variegated with white and brown; aperture sinuated in front; outer lip simple; inner lip callous.

Length $8\frac{1}{2}$, breadth $5\frac{1}{2}$ lines.

Testa ovata, solida, pallide fusca, zonis 2 nigricantibus aliquando notata; spira apertura brevior; anfractibus planulatis, lineis 6 fuscis spiralibus et costis tuberculatis ornatis; apertura antice sinuata; labro simplici; labio calloso.

P.S. July 27th.—In addition to the foregoing shells, several others were collected by Capt. Speke, when employed, under the command of Capt. Burton, in exploring Central Africa in the years 1856-9; these were deposited in the first instance with the Geographical Society, and are now transferred to the British Museum.

A specimen of *Ampullaria (Lanistes) sinistrorsa*, Lea, and odd valves of two species of *Unio*, both smooth and olive-coloured, were picked up in the Ugogo district, an elevated plateau in lat. 6° to 7° S., long. 34° to 35° E.

A large *Achatina*, most nearly related to *A. glutinosa*, Pfr., is the "common snail" of the region between Lake Tanganyika and the East coast. Fossil specimens were obtained in the Usagara district, at a place called Maroro, 3000 feet above the sea, overlooking the Lufiji River, where it intersects the coast range (lat. 7° to 8° S., long. 36° to 37° E.).

Another common land snail of the same district is the well-known "*Bulimus caillaudi*, Pfr.," a shell more nearly related to *Achatina* than *Bulimus*.

Captain Speke also found a solitary example of *Bulimus ovoideus*, Brug., in a musjid on the island of Kiloa (lat. 9° S., long. 39° to 40° E.). This species is identical with *B. grandis*, Desh., from the island of Nosse Bé, Madagascar, and very closely allied to *B. libe-rianus*, Lea, from Guinea.

Mr. Hermann Schlagintweit exhibited specimens of heads of a Sheep from Thibet, which showed a curious modification in the form of the horns. He referred them to the sheep described as *Ovis hunia* by Mr. Hodgson (Journ. As. Soc. Bengal, i. p. 348, xvi. p. 1005; and Proc. Zool. Soc. for 1834, p. 99): but the specimens exhibited were remarkable on account of a curious malformation—the horny part of the two horns being entirely grown together so as to form apparently but one single horn. This might, it was stated, not improbably have given rise to one of the various modifications of the fabulous Unicorn of Thibet. This peculiar formation was only met with in tame animals; and in the three specimens laid before the Society (one of which was presented some time ago by Mr. Hodgson to the India House, the two others being from Messrs. Schlagintweit's collections) the upper part of the horns, which perhaps would have touched the animal's neck, had been artificially cut off.

It was considered to be well worthy of notice, that this peculiar malformation seemed to be limited to the *Ovis hunia*, none of the members being aware that a similar malformation was ever met with among either wild or domesticated sheep.

On searching the rich collections of London for similar objects, Messrs. Schlagintweit found one example in the College of Surgeons, where, by an evident mistake, it is called in the Catalogue a malformation of *Ovis ammon*. Another specimen was stated to exist in the British Museum.

The Secretary exhibited an egg laid by the Apteryx (*Apteryx mantelli*) which had been living in the Gardens since 1852. The egg when deposited (June 9th) weighed $14\frac{1}{2}$ ozs., the contents thereof weighing $13\frac{1}{2}$ ozs. The shell was smooth, and of a dirty white colour; the form an elongated oval, slightly tapering towards the small end, 4.75 inches in long, and 2.9 inches in short diameter. The weight of the living bird was ascertained to be 60 ozs.; so that the egg was nearly equal to one-fourth of the weight of the bird.